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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/622,639 | 07/21/2003 | Andreas Wenning | 236334US0 | 4580 |
| 22850 | 7590 | 11/17/2004 | EXAMINER | |
| OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | TRAN, THAO T | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1711 | |

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/622,639

Applicant(s)

WENNING ET AL.

Examiner

Thao T. Tran

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/07/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This is in response to the Amendments filed on September 14, 2004.
2. Claims 1-20 are currently pending in this application. Claims 1 and 19 have been amended.

Claim Rejections - 35 USC § 102

3. In view of the prior Office action of June 28, 2004, the rejection of claims 1-20, under 35 U.S.C. 102(e) as being anticipated by Grenda et al. (US Pat. 6,710,136), has been withdrawn due to the amendments made thereto.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grenda et al. (US Pat. 6,710,136).

Grenda teaches a coating method and a coating composition containing a polyurethane powder; wherein the polyurethane powder comprises:

A) 3-25% by weight of polyurea formed from at least one difunctional amine and isocyanate reactant in amounts such that the NCO/NH₂ ratio ranges from 0.9 to 1.1:1;

B) 35 to 75% by weight of at least one polyester synthesized from polyols and 15-100 mol. % of succinic acid or its anhydride, having an OH number of 20-250 mg KOH/g;

C) 7 to 25% by weight of at least one curing agent of a blocked polyisocyanate, isocyanurate, uretdione or a combination thereof having a functionality of at least 2; and

D) 1 to 50% by weight of auxiliaries and additives;
wherein from 0.6 to 1.2 NCO groups are available per OH group of the resin (see claim 1).

Although Grenda is silent with respect to the melting point and the viscosity of the polyester, since the reference teaches the same chemical, its properties, such as melting point and viscosity, would inherently be the same as the presently claimed invention.

Grenda further teaches the method further comprising the steps of homogenizing the polyurethane powder in a melt; cooling the melt to form a solid; and pulverizing the solid to form a powder having particle size of less than 100 microns. The coating step comprises depositing the powder onto a metal substrate (iron panel) by electrostatic powder spraying; and the method further comprises curing the coating (see col. 3, ln. 21-35).

Grenda's coating of the metal panel appears to be a batch process, whereas the coil-coating process is a continuous process. Thus, continuous operation would have been obvious in light of the batch process of the prior art and would not impart patentability. See MPEP 2144.04, subsection VE.

With respect to the substrate, Grenda teaches the substrate to be a metal panel and not a metal coil. However, it would have been obvious to one of ordinary skill in the art that the same

Art Unit: 1711

electrostatic spraying process would have been applied to a metal panel or a metal sheet (metal coil), as disclosed in the instant specification, paragraphs 0005 & 0009.

Grenda further teaches the use of isophorone diamine, isophorone diisocyanate, and leveling agents or pigments (see col. 2, ln. 44-48), and the blocker being triazoles or oximes (see col. 3, ln. 13-15). The gloss level, when the substrate is at an angle of 60°, is from 12-47 (see Table 2).

6. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grenda in view of Faucher et al. (US Pat. 6,423,425).

Grenda teaches a coating method and a coating composition containing a polyurethane powder; wherein the polyurethane powder comprises:

A) 3-25% by weight of polyurea formed from at least one difunctional amine and isocyanate reactant in amounts such that the NCO/NH₂ ratio ranges from 0.9 to 1.1:1;

B) 35 to 75% by weight of at least one polyester synthesized from polyols and 15-100 mol. % of succinic acid or its anhydride, having an OH number of 20-250 mg KOH/g;

C) 7 to 25% by weight of at least one curing agent of a blocked polyisocyanate, isocyanurate, uretdione or a combination thereof having a functionality of at least 2; and

D) 1 to 50% by weight of auxiliaries and additives;
wherein from 0.6 to 1.2 NCO groups are available per OH group of the resin (see claim 1).

Although Grenda is silent with respect to the melting point and the viscosity of the polyester, since the reference teaches the same chemical, its properties, such as melting point and viscosity, would inherently be the same as the presently claimed invention.

Grenda further teaches the method further comprising the steps of homogenizing the polyurethane powder in a melt; cooling the melt to form a solid; and pulverizing the solid to form a powder having particle size of less than 100 microns. The coating step comprises depositing the powder onto a metal substrate (iron panel) by electrostatic powder spraying; and the method further comprises curing the coating (see col. 3, ln. 21-35).

However, Grenda does not teach the coating step to be a coil-coating step or that the substrate is a metal coil.

Faucher teaches an electrodeposition process of coating a metal substrate with a polyurethane; wherein the substrate can be aluminum or ferrous (see col. 2, ln. 54-67), an iron-containing primer is applied to the substrate, and the polyurethane layer is applied by a coil coating process (see col. 5, ln. 26-34, 66-67; col. 6, ln. 1-5), thus the substrate would inherently be a coil.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have employed the coil coating process, as taught by Faucher, in the invention of Grenda, because Faucher teaches that the coil coating, immersion, or mill application could have been used to coat the polyurethane layer on the metal substrate containing iron (see col. 5, ln. 8-12).

Grenda further teaches the use of isophorone diamine, isophorone diisocyanate, and leveling agents or pigments (see col. 2, ln. 44-48), and the blocker being triazoles or oximes (see col. 3, ln. 13-15). The gloss level, when the substrate is at an angle of 60°, is from 12-47 (see Table 2).

Response to Arguments

7. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao T. Tran whose telephone number is 571-272-1080. The examiner can normally be reached on Monday-Friday, from 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1711

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tt
November 12, 2004


THAO T. TRAN
PATENT EXAMINER